

The Influence of Inflation on the Real Economy

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ABSTRACT

Various studies on inflation's relationship with the real economy show that inflation harms economic development. Also, various economic theories confirm that inflation affects a country's economic performance even though monetary policies had difficulties expressing this. This study shows that inflation may be linked to the overall elasticity of factor substitution and that this is a solution to the problem at hand. Inflation may have a detrimental impact on factor substitution in various microeconomic ways. When applied to a fundamental neoclassical monetary growth model, this impact is frequently substantial enough to challenge the benchmark finding in the steady-state and to outweigh any potential positive effects of inflation on the convergence path. There are several ways this study adds to the improvement of aggregate models for economic growth.

Keywords: *Inflation, Economic Development, Monetary policy*

1. INTRODUCTION

Several academics have noted that inflation was not regarded as a severe danger to economic development until a few decades ago, even though many countries worldwide were already suffering from it [1]. Deflation was already a problem in several countries prior to the 20th century. Even though paper money has been around for a long time, it was only used in times of conflict and uncertainty that saw its excessive production. There was no persistent inflation in regular periods of economic activity since currency production was supported entirely by Gold and US dollars. For budgetary reasons, governments began to inflate after the breakdown of Bretton Woods institutions. Inflation's history throughout the previous few centuries [2]. A few instances of stable inflation may be seen in the following graphs, which demonstrate a gradual rise in prices up until early in the twentieth century.

The actual price change since 1209 (left) and 1900 (right) in a single graph (right). Except for World Wars I and II, this pattern persisted until the 1970s. The average inflation rate rose during the 1970s and 1980s, then fell back to its 1960s level. Growth in average production was negatively connected to inflation for the whole period from the 1970s onward.[3]

Mensch and Tillmann made similar findings, stating that the pre-World War II past included periods of

inflation followed by periods of deflation. At times of economic growth, inflation was predicted to rise and fall. However, before World War II, there was no long-term trend of inflation or deflation in the world. In the post-Bretton Woods era, central bank money creation had no equal backing in gold or the US dollar, causing an abrupt shift of inflation behavior in the early 1970s. Furthermore, this process was fueled by lax financial market restrictions at private banking institutions. The actual impacts of inflation were not studied in economic theories since it was not a significant issue prior to World War II.

2. WHAT IS INFLATION

2.1 CPI index

CPI is the consumer price index, an indicator of price changes that reflects the prices of products and services related to residents' lives, expressed in percentage changes. It is one of the leading indicators to measure inflation. Generally defined as inflation exceeding 3%, more than 5% is relatively severe inflation. The definition of inflation is not only a superficial phenomenon to measure or explain. However, persistently high inflation will damage households' well-being significantly when it is not offset by comparable wage growth, leading to lower purchasing power.

As part of the research, secondary data were analyzed quantitatively and qualitatively to offer context for the

market stock and monetary policy in general. Academic papers, government records, and working papers were used to gather information. In addition, the conversations were informed by extensive usage of the method.

Using STATA statistical software, the study determined how the dependent and independent variables in this research are related. The independent variable in this study was GDP, a measure of economic performance. Independent variables used in the study include inflation, Poverty rate, stock market price, and CPI (see the model below).

$$GDP = A + \beta Inf_t + \beta CPI_t + \beta SP_t + \epsilon_t \quad (1)$$

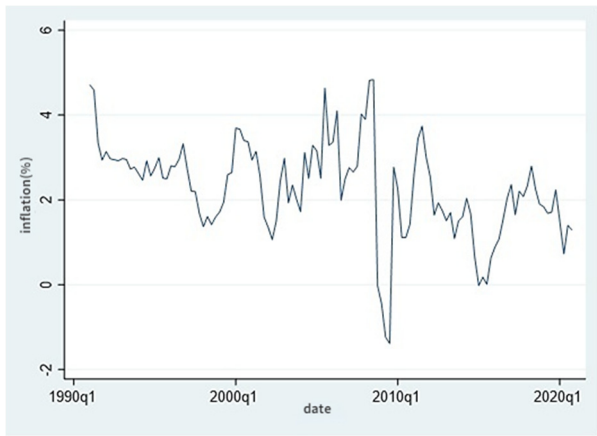


Figure 1 Inflation rate

Regarding economics, inflation is measured by the annual percentage rise in a price index (in the below case: consumer price index). Inflation declined dramatically between 1990 and 2000, as seen in the graph. However, there was a significant rise in inflation from 2000 to 2010. Inflation is a measure of the rate of change in the price level over some time. In most cases, the rate of depreciation in the purchasing power of money is almost equal to the rate of rising. Cities around the United States are represented in the statistics. In addition, as seen in the graph, prices in the United States are expected to rise by 2020 compared to the previous year. Looking at these graphs shows more about the US economy's growth rate and per-capita income. The Taylor rule might be tweaked by increasing the inflation coefficients and output gaps. There was also the possibility of acting more aggressively only if inflation was already judged "low."

According to Cleveland Fed President Jerry Jordan, 'Providing monetary baseline supply and demand arrangements for central bank money may be an alternative to the Taylor framework as interest rates approached zero.'

2.2 Stock

The stock market was employed in this study, and the graph in the graph above shows that prices have been rising continuously since 1990. While there was a short dip in pricing in 2003 and 2010, the trend has risen back up and gradually rising since then.

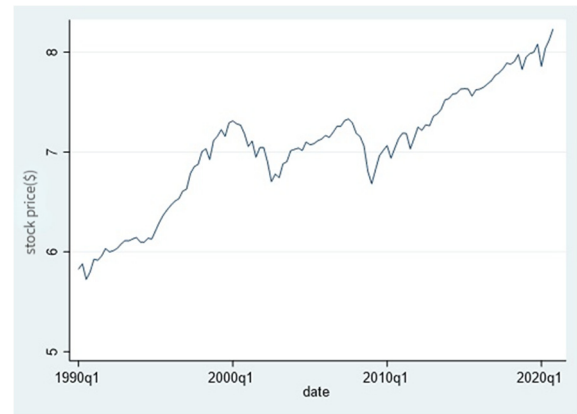


Figure 2 Stock market prices

Throughout the examination, a correlation between order one and the AR1 regression estimate technique is discovered. Furthermore, the Hausman test reveals that all variables are exogenous when it is used. To conclude, all variables are steady, as shown by ADF testing.

Table 1 Variable descriptive statistics

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|-----------------|-----|------|-----------|-------|-------|
| GDP(trillion) | 760 | 0.19 | 1.74 | -3.32 | 3.12 |
| Inflation(%) | 760 | 3.37 | 1.14 | -1.39 | 7.84 |
| CPI(%) | 759 | 3.3 | .02 | -.09 | .04 |
| Pov(%) | 760 | 7.82 | .40 | 0.00 | 11.10 |
| Stock price(\$) | 760 | 7.51 | 16.03 | - | 38.23 |
| | | | | 50.58 | |

Table 2. Regression result

| GDP | Coef. | St.Err. | t-value | p-value | 95% Conf | Interval |
|-----------------|--------|---------|---------|---------|----------|----------|
| inflation(%) | .836 | .123 | 6.00 | 0 | .5 | .992 |
| Stock_Price(\$) | 23.029 | 10.319 | 2.33 | .022 | 3.593 | 37.365 |
| Pov(%) | -8.93 | .783 | 1.22 | 0.0 | -933 | .29 |
| CPI(%) | 1.91 | .102 | 5.8 | .01 | .9901 | .89 |
| Constant | 11.555 | .312 | -3.98 | 0 | -2.183 | -.938 |

| | | | |
|--------------------|---------|----------------------|---------|
| Mean dependent var | 0.126 | SD dependent var | 1.835 |
| R-squared | 0.332 | Number of obs | 120 |
| F-test | 29.131 | Prob > F | 0.000 |
| Akaike crit. (AIC) | 329.269 | Bayesian crit. (BIC) | 338.632 |

$$\text{GDP} = 11.56 - 0.75\text{Inf} + 24.03\text{Stock}_p - 8.93\text{Pov} + 1.91\text{CPI} \quad (2)$$

As shown in the model above, inflation has a negative relationship to economic development; thus, a unit that increases inflation results in a 0.746 reduction of GDP. On the other hand, according to the result above, CPI and stock prices have a positive relationship with GDP; this implies that a unit increase in these variables increases GDP by 24.03 and 1.91 respectively other factors held constant. Furthermore, finally, the poverty rate reduces the rate of economic development, and the results above confirm this.

3. THE FUNCTION OF INFLATION

This wave of inflation is that consumers have many savings on hand due to the government's stimulus package and the year-long slump in consumption caused by various business restrictions in the early days of the epidemic. Now their pent-up demand has exploded, and they are buying goods in large quantities, and the supply of these goods is in short supply. As a result, costs are rising at every stage, from production to sales, driving up consumer prices, and some companies have seized the rare opportunity to raise prices. There are also fewer workers in the job market, sparking demand for wage increases and dampening overall productivity. Along with many others, these factors are driving up costs—economic problems caused by the Covid-19. The critical point is that consumers have many savings due to the government's stimulus package and the year-long consumption slump caused by various business restrictions in the epidemic's early days. Now their pent-up demand has exploded, buying goods in large quantities, and the supply of these goods is in short supply. There are also fewer workers in the job market, sparking demand for wage increases and dampening overall productivity. These factors, along with many others, are driving up costs. Energy prices, including gasoline, have risen as oil and gas production lags the rate of consumer demand recovering from the pandemic. This recovery in the market has also triggered disruptions in supply chains. Truck drivers, seaport berths, and warehouse space are all running short, leading to costly delays and escalating costs to transport goods. As a result, costs are rising at every stage, from production to sales, driving up consumer prices, and some companies have seized the rare opportunity to raise prices. The sharp rise in U.S. stocks has undoubtedly made U.S. investors richer and stimulated consumption. However, the U.S.

real economy is awful, and the U.S. trade deficit is at a record high. As U.S. stock prices soar, the pressure on U.S. stocks to raise interest rates is increasing. When people have money, they do not want to work anymore and put their money into houses and stores. This has caused stocks and house prices to skyrocket.

4. THE ASPECT OF GOVERNMENT

4.1 How the government handles inflation

Raising interest rates can not only restrain prices, although this will undoubtedly have a massive impact on the U.S. real economy and the U.S. stock market. It could also drive up costs for U.S. companies. However, the pace of recovery of the real economy in the United States will undoubtedly slow down, and the growth rate of GDP will slow down or even show negative growth. So what the Federal Reserve System Fed can do is raise interest rates to curb inflationary pressures. If the United States raises interest rates, the impact on the global economy is also huge. Because global capital will flow back to the U.S, another way to slow inflation is to have most of the money going to the U.S. when there is a war. Because people think the dollar is reputable and reliable. "If we see inflation persisting at high levels longer than expected, if we have to raise interest rates more over time, then we will," Powell said Tuesday. It shows the attitude of the United States to inflation.

4.2 History event of inflation

As an example, early classical and Keynesian economists had little faith in the potential of inflation to harm economic growth. Since the end of World War II, most of the empirical and theoretical work has been based on this time. It was found that inflation had various effects on growth, with some publications suggesting a positive impact, while others supported the idea that inflation had a detrimental impact on growth. It was as cited by [4], Mundell's research in 1963 was the one who supported the idea that inflation had a positive effect on economic growth. Agents are forced to save more due to inflation, which lowers the actual interest rate. As a result, rapid capital accumulation and low-interest rates enhance output growth. Neo-classical economists found that one-time inflation boosts capital accumulation because of its impact on portfolio management. Accurate balances and physical assets are assumed to be part of an agent's capital portfolio [5]. They replace capital goods

with money as the rate of inflation rises. This increases the economy's capital stock and production. On the other hand, Tobin contends that inflation's beneficial benefits on growth are only transient and that the sole source of long-term high output growth is technical innovation. [6], Friedman pointed out that inflation's impact on production growth is uncertain. Inflation, according to Friedman, stifles growth at all positive levels and must be avoided at all costs. In the early 1970s, rising inflation was followed by reduced growth in industrialized economies, which experimentally confirmed this perspective. Around this period, the Phillips curve connection was challenged by rising literature.

It was previously said that Friedman, in his study, did not obtain any practical backing for his idea of a negative inflation rate because central bankers throughout the world think that complete price stability impedes the effectiveness of price systems when the economy is vulnerable to supply shocks [7]. Zero inflation advocates claim that price adjustments are required when a sector experiences a price shock, and total stability will produce price or wage reductions for some enterprises while increasing those of others. Pricing and wage rigidities in a stable price environment prevent the adjustment of shocks, but under high inflation regimes, this adjustment occurs even if all nominal prices (wages) rise.

Several models have been used to produce nominal pricing rigidities in the theoretical literature. Generally, nominal rigidities are caused by information difficulties, price points, fair pricing, implicit coordination and adjustment costs, and other issues. Models with information issues receive inspiration from misperception theory, in which individual companies are less aware of aggregate shocks and do not react rapidly to these shocks [8]. Firms cannot be continuously kept up to date on the elements that impact their optimal prices since doing so necessitates ongoing expenditures for information collecting, as proposed by [9] in his costly information model. At any one moment, only a tiny percentage of companies are aware of the new pricing strategy, while the others rely on their (most of companies) prior knowledge to determine rates for the next fiscal year [10].

5. CONCLUSION

For every year that the price of a widget rises, the firm that creates the widgets likewise rises in value. Investing in that firm's shares might shield from the effects of inflation. Inflation, on the other hand, does not benefit everyone. Those with variable-rate debt will likely see their minimum payments grow in tandem with inflation. High credit card debt is the most common culprit, but variable-rate mortgages are not immune either. Buyers of homes are also harmed by rising costs of goods and services [11]. The pace of inflation is expected to drive up the cost of housing. Even if established and emerging

economies have different structures, the degree of inflation that begins to increase the dispersion of sectors prices and production growth is the same in both groups. According to this, emerging nations have the same monetary policy alternatives as developed countries. For nations with significant political and economic tied to the established economies, such as our selected sample of rising European markets. This is particularly true Because the E.U. member states' labor and product markets are so intertwined, monetary policy measures must be coordinated across all member states, regardless of economic progress. Pricing and wage rigidities in a stable price environment prevent the adjustment of shocks, but under high inflation regimes, this adjustment occurs even if all nominal price(wages) rise. Nominal value is the value reflected in terms of historical cost. In market risk management, little value generally does not have substantial significance due to changes in market price factors.

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